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EFFICACY OF MICROPULSE TRANSCLERAL CYCLOPHOTOCOAGULATION IN UNCONTROLLED GLAUCOMA AT SRINAGARIND HOSPITAL, THAILAND

Phornrak Sriphon¹, Niphon Sayawat¹

¹*Glaucoma Unit, Department of Ophthalmology, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand*

Purpose: This study aimed to evaluate the efficacy and safety of micropulse transcleral cyclophotocoagulation in patients with uncontrolled glaucoma.

Methods: This is a prospective case series study. Twenty-one eyes of 15 patients were included. Studied eyes underwent micropulse transcleral cyclophotocoagulation. Follow-up visits were performed on week 1 and month 1, 2, 3, 6, 12 and 24; patients underwent complete slit-lamp examination, BCVA, Goldmann applanation tonometry, gonioscopy, visual field testing and grading pain score.

Results: This preliminary result comprised 21 eyes. Diagnoses were primary open-angle glaucoma (26.7%), closure angle glaucoma (26.7%) and secondary glaucoma (46.6%). The mean age of the study group was 49.20 ± 19.3 years (12-76 years). Preoperative BCVA were range 6/9 to HM. 73% of patients underwent previous glaucoma surgery. After 1 week of follow-up, mean intraocular pressure decreased from 22.3 ± 5.4 (range 14-35) mmHg at baseline to 10.1 ± 4.1 (range 0-20) mmHg, after 1 month and 2 months of follow-up; the mean (\pm SD) intraocular pressure dropped from baseline to 16.4 ± 6.2 (range 6-28) mmHg and 17.33 ± 6.45 (range 6-28) mmHg respectively. The mean IOP difference between baseline and 2 months follow up (4.39 mmHg) prove to be statistically significant ($p = 0.037$). The number of medications dropped from 3.6 ± 0.6 before surgery to 2.9 ± 0.2 after surgery. Mild side effects occurred in all patients were moderate postoperative pain and mild inflammation in anterior chamber but complete resolved after 1 week. No patient had loss of BCVA. 3 in 15 patients needed further surgery for achieved success. The overall qualified success after 2 month was 53.6%.

Conclusions: Micropulse transcleral cyclophotocoagulation was effective method for lowering IOP in case of uncontrolled glaucoma with a low rate of complications at 2 month follow up period.

References:

1. Tan AM, Chockalingam M, Aquino MC, Lim ZI, See JL, Chew PT. Micropulse transcleral diode laser cyclophotocoagulation in the treatment of refractory glaucoma. *Clin Exp Ophthalmol* 2010;38(3):266-72.
2. Vernon SA, Koppens JM, Menon J. Diode laser cyclophotocoagulation in adult glaucoma: long-term results of a standard protocol and review of current literature. *Clin Exp Ophthalmol* 2006;34(5):411-20.
3. Aquino D, Barton K, Marie WT, Shelving S. Micropulse versus continuous wave transscleral diode cyclophotocoagulation in refractory glaucoma : a randomised exploration study. *Clin Exp Ophthalmol* 2015;43(1):40-6.
4. Kuchar S, Moster M, Reamer C, Waisbourd M. Treatment outcomes of micropulse transscleral cyclophotocoagulation in advanced glaucoma. *Lasers Med Sci* 2016;31(2):393-6.

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